

**Notice of Allowability**

Application No.

10/021,606

Examiner

Todd Ingberg

Applicant(s)

WHITEHILL, CLIFFORD A.

Art Unit

2124

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/30/2004.
2. ☒ The allowed claim(s) is/are 1-15.
3. ☒ The drawings filed on 30 November 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

### REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

In the First Action On Merit (FOAM) the Examiner was able to locate many reference on defining operations for pre-compiler directives. But was unable to locate a directive that taught the bit wise operations of the invention. The original claim limitations failed to clearly and concise claim the bit wise operations of a directive. this was pointed out in the FAOM by the Examiner in a Conclusion Section as shown below.

#### *"Conclusion*

8. The prior art rejection can easily be overcome by claiming of macro definition/defining in a mask for defining a bit-field operations with the limitations of the independent claims present. The current claim language reads on defining bit-field definitions which include defining such operations in an Integrated Development Environment (IDE) such as Visual C++ using the prior art shown in figures 1- 6."  
(From FAOM)

The Applicant has amended the independent claims to clearly claim the invention as shown below"

#### Claim 1 (Currently Amended)

A method executing on a computer and stored on a computer readable medium for implementing bit fields for a machine word for use with compiler independent bit field macros, comprising: defining a variable corresponding to the machine word; defining at least one bit-field within the variable, the bit-field having a first bit and a second bit; for each bit field, determining a first bit number defining a position of the first bit of the bit field within the variable; for each bit-field, determining a second bit number defining a position of the second bit of the bit-field within the variable; and for each bit-field, concatenating the first bit number and second bit number together to form a bit field definition number defining a location of the bit-field within the variable.

The claimed invention appears novel over prior art of record. Applicant's remarks are copied below. Some OCR scanning errors may be present.

#### "Rejections under 35 USC 102(b):

Applicant respectfully traverses the rejection of claims 1, 3 and 9-10 under 35 USC 102(b). The independent claims are claims 1 and 9. Independent claim 1 calls for:

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- for each bit-field, determining a first bit number defining a position of the first bit of the bit field within the variable;
- for each bit-field, determining a second bit number defining a position of the second bit of the bit-field within the variable; and
- for each bit-field, concatenating the first bit number and second bit number together to form a bit field definition number defining a location of the bit field within the variable.

Independent claim 9 calls for:

- forming a bit field definition number having a first portion and a second portion, the first portion formed from a location of the first bit in the machine word, the second portion formed from a location of the second bit in the machine word, the bit-field definition number defining a location and range of the bit-field in the machine word; and
- associating the bit field definition number with the bit-field in the machine word.

Applicant respectfully submits that the prior art of record does not teach or suggest these limitations that describe how to form "bit field definition numbers."

The prior art of record in the background section of the specification shows the normal way of handling bit-fields in the C and C++ programming languages. Specifically, a "structure" is "defined" to have N elements, referred to as "bit-fields." Only the length, or number of bits, of each bit-field is specified in the definition of the structure, as shown in Fig. 1 and on page 1 at lines 22-26. The location or position of each bit-field within the structure, however, is not specified. This lack of specifying bit-field location combined with the fact that different compilers assign bit fields in different orders leads to the problem with bit order illustrated by Fig. 3 and described on page 2 at lines 6-16. In other words, the prior art of record does not describe how to form a "bit-field definition number" that defines the location of the bit-field within a variable, as called for in claim 9. Similarly, the prior art of record does not describe how to form a "bit field definition number" that defines the location and range of the bit-field in a machine word, as called for in claim 9. Therefore, the prior art of record also does not teach or suggest how to determine first and second bit numbers that define positions of first and second bits of the bit-field within the variable, and which, when concatenated together, form the bit-field definition number and define the location of the bit-field within the variable, as called for in claim 1. Likewise, the prior art of record does not teach or suggest first and second portions of a bit field definition number formed from locations of first and second bits in a machine word, as called for in claim 9.

Applicant respectfully submits, therefore, that independent claims 1 and 9 are not anticipated by, are not obvious from, and are patentable over the prior art of record, since the prior art of record does not teach or fairly suggest the above discussed claimed limitations. Additionally, since claims 3 and 10 depend from independent claims 1 and 9, respectively, claims 3 and 10 also are not anticipated by, are not obvious from, and are patentable over the prior art of record for the same reasons."

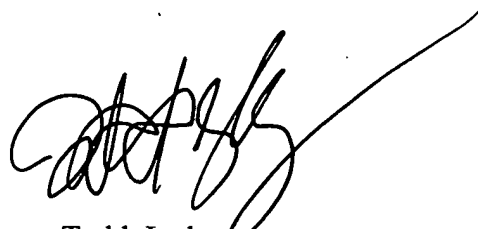
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### **CORRESPONDENCE INFORMATION**

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Todd Ingberg whose telephone number is (571) 272-3723. The examiner can normally be reached on during the work week..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Todd Ingberg  
Primary Examiner  
Art Unit 2124